

CLAIMS

1. A planetary type gear transmission unit comprises sun, planet and ring gears and a planet carrier, said planet carrier comprising a planet bogie plate which supports and locates circumferentially spaced planet gear bearings on which planet gears are mounted, and at least some of said bearings being taper roller bearings.
2. A gear transmission unit according to claim 1, wherein it comprises planet gears arranged in axially aligned pairs.
3. A gear transmission unit according to claim 2, wherein the bearings support respective pairs of aligned planet gears.
4. A gear transmission unit according to claim 3, wherein two gears of each pair are positioned at opposite sides of the plate.
5. A gear transmission unit according to any one of the preceding claims, wherein each planet gear of a pair is mounted on a pair of tapered roller bearings.
6. A gear transmission unit according to any one of the preceding claims and comprising a pair of tapered roller bearings arranged in an O configuration.
7. A gear transmission unit according to any one of the preceding claims, wherein the bearings for each circumferentially spaced planet gear position are supported on a shaft which, in use, self adjusts in said angular position relative to the bogie plate.
8. A gear transmission unit according to any one of claims 1 to 6, wherein the bearings for at least some circumferentially spaced planet gear positions are supported on a shaft which is substantially, rigidly secured to the bogie plate.
9. A gear transmission unit according to claim 8, wherein each said shaft is substantially rigidly secured to the bogie plate.
10. A gear transmission unit according to any one of claims 7 to 9, wherein the bogie plate is able to deform elastically to allow self adjustment of the angular position of the or each shaft relative to the axis of rotation of the ring gear.

11. A gear transmission unit according to any one of the preceding claims, wherein the main bearing comprises an inner ring bearing surface of a diameter greater than that of the toothed surface of the ring gear.
12. A gear transmission unit according to any one of the preceding claims wherein the planet carrier provides a radially extending torque transmissions path which is torsionally stiff but relatively compliant in an axial direction parallel with the axis about which the rotational forces act.
13. A gear transmission unit according to any one of the preceding claims, wherein the planet gears are supported relative to the bogie plate by a shaft of the flexpin type.
14. A gear transmission unit according to claim 1, and substantially as hereinbefore described.